

Family DALCERIDÆ

Paracraga argentea Schaus.

Elliptical, flattened, onisciform; abdominal feet wanting, venter membranous; thoracic feet minute; head incomplete above, retracted in joint 2; joint 2 forming a hood, lower than joint 3 and partly folded under it, but pigmented and with a large spiracle high up laterally. Other spiracles on joints 5 to 12 in line, in the edge of the membranous ventral area. Joint 2 yellow dorsally with purple-brown anterior line; joint 3 with a broad semilunate collar-like purple-brown band in front; dorsum of joints 3 to 12 yellow, with a subdorsal dark red band, joined at the ends and bent out a little at joints 4, 7, and 10, where a black superlateral spot cuts the edge of the yellow area. Sides colorless, presumably transparent. Appendages shrunken and undecipherable in the inflated specimen, apparently fleshy with black cores, three on joint 3, two on joint 2, one lateral one on joints 5 to 13.

Cocoon spun on the back of a leaf, a thin net of yellow silk, on top of which is an irregularly circular area of flesh-colored opaque silk, with a band of the same reaching to the anterior and posterior ends of the cocoon. These bands widen outwardly and cover, beneath the base of the widened part, a mass of silk stained dark brown.

Food plant: *Terminalia buceras*.

NEW GALL MIDGES (ITONIDIDÆ)

By E. P. FELT, Albany, N. Y.

This paper characterizes a new species of *Tritozyga*, an American genus known for nearly half a century only by a brief generic diagnosis and represented during this time only by a unique and mutilated male. *Konisomyia* is an exceedingly interesting synthetic form. The other species described in this paper were reared and are therefore accompanied by valuable biological data.

Tritozyga fenestra, new species.

One specimen of this peculiar female was taken on the office window June 3 and another June 6, 1914. Nothing is known concerning its life history and habits.

Female: Length, 1.1 mm. Antennæ very short, dark brown; eight segments, the second somewhat enlarged, subglobose, the others sessile, subcylindric, the fifth with a length one-fourth greater than its diameter and near the middle a sparse whorl of long, stout, simple setæ; terminal segment with a length two to two and one-half times its diameter, evidently composed of two or three closely fused units and tapering to a narrowly rounded apex. Palpi: First segment irregular, the second with a length about two and one-half times its diameter, the third as long as the second, more slender, the fourth one-third longer than the second, greatly dilated. Mesonotum dark brown, almost black. Scutellum and postscutellum shining dark brown. Abdomen dark brown. Wings hyaline, subcosta uniting with the anterior margin just beyond the basal half, the third vein at the distal fourth, the fourth vein rudimentary, forked, posterior branch a nearly straight continuation, the anterior strongly curved, S-shaped; fifth vein simple, uniting with the posterior margin at the distal fifth, the sixth at the basal third. Halteres fuscous yellowish basally, fuscous apically. Coxæ and femora fuscous yellowish, tibiæ and tarsi dark brown; claws slender, evenly curved, minutely denticulate basally, the pulvilli nearly as long as the claws. Ovipositor short, terminal lobes triarticulate, the distal segment roundly ovate and rather thickly setose. Type Cecid 1557.

Konisomyia, new genus.

The unique form described below has the general appearance of *Campylomyza*, though the forked rudimentary fourth vein compels its reference to the *Lestremariæ*. It is easily recognized by the large, rounded wings, the absence of a cross vein, and the proximity of the third vein to the basal portion of subcosta. The type is *K. fusca*, new species.

Konisomyia fusca, new species.

This remarkable fly was taken in the office June 2, 1914, nothing being known concerning its habits or life history. The most striking peculiarities have been outlined in the generic diagnosis.

Female: Length, 2 mm. Antennæ hardly extending to the base of the abdomen, sparsely haired, dark brown; eight segments, the second globose, slightly enlarged, the fifth sessile, subcylindric, with a length about equal to its diameter; subbasally there is a sparse whorl of stout setæ and near the middle a scattering whorl of finer hairs; terminal segment compound, evidently composed of three segments and with a length

approximately four times its diameter. Palpi: First segment irregular, the second narrowly oval, the third a little longer than the second, more slender, the fourth about one-third longer than the second, greatly dilated. Eyes black, coarsely granulate, narrowly approximate at the vertex; ocelli apparently present, three in number. Mesonotum shining brownish black. Scutellum and postscutellum dark brown. Abdomen fuscous orange, the dorsal sclerites of segments 1 to 5 reddish brown, the others a little darker; venter yellowish salmon. Wings hyaline. Costa pale straw, subcosta and the third vein approximate basally, the former uniting with the anterior margin near the middle, the latter at the distal ninth; cross vein wanting; the fourth vein obsolescent, forked; the fifth vein simple, slightly curved, joining the posterior margin at the distal fourth, the sixth strongly curved near the middle. Halteres yellowish basally, slaty brown apically. Coxæ fuscous yellowish, the legs a nearly uniform fuscous straw; claws simple, strongly curved, the pulvilli a little longer than the claws. Ovipositor short, stout, the lobes triarticulate, the terminal segment broadly oval and thickly setose. Type C. 1555.

Lasioptera tibialis, new species.

The unusually small midges were reared April 24, 1914, from a stem or branch gall on *Pentstemon antirrhinoides*? collected by Mr. E. P. Van Duzee near La Jolia, California. The species runs in our key to near *L. allioniae* Felt, from which it is easily separated by its smaller size, more hairy wings, the reddish brown scutellum, and the peculiar markings of the tibiae. A specimen of the beautiful little *Urellia mevarna* Walk., probably an inquiline, was also reared from this gall.

Gall: Length, 1.5 cm.; diameter, 4 to 5 mm., unicellular, rather hard. This is a subcylindric enlargement of the stem or branch and is traversed by a simple median gallery. The coloring of the deformity varies from a reddish brown to greenish and is not very different from that of the normal stem.

Larva: Length, 3 mm., rather slender, tapering at both extremities, yellowish orange, the breastbone long, bidentate, and with the lateral angles of the anterior portion expanded.

Male: Length, 1 mm. Antennæ short, sparsely haired, dark brown; 16 segments, the fifth with a length one-fourth greater than its diameter; terminal segment suboval or subglobose. Palpi: First and second segments short, irregular, the third nearly twice the length of the second,

narrowly oval, the fourth one-half longer than the third, slender. Mesonotum dark brown, the submedian lines narrowly white-scaled. Scutellum reddish brown, postscutellum darker. Abdomen mostly dark brown, the basal segment with silvery scales, the others with rudimentary posterior lines of whitish scales and irregularly rectangular lateral patches of the same. Genitalia fuscous yellowish, sparsely white-haired; venter yellowish, sparsely clothed with dull silvery scales. Wings hyaline, with unusually long, thick branches; costa dark brown, a small white spot near the basal third. Halteres fuscous basally, whitish apically. Coxæ and legs mostly dark reddish brown, the tibiæ narrowly annulate with white. The pulvilli nearly as long as the rather heavy, unidentate claws. Genitalia: Basal clasp segment moderately long; terminal clasp segment short, stout; dorsal plate deeply and triangularly emarginate, the lobes tapering to a narrowly rounded apex; ventral plate tapering, broadly and very slightly emarginate, almost truncate. Harpes long, slender, minutely denticulate apically.

Female: Length, 1.25 mm. Antennæ dark brown; 19 segments, the fifth with a length three-fourths its diameter, the terminal segment subglobose. Palpi nearly as in the male, except that the third and fourth segments are relatively stouter and the fourth somewhat shorter. Mesonotum dark reddish brown, the submedian lines sparsely white-haired. Scutellum reddish brown, white-scaled apically, postscutellum darker. Abdomen dark brown, the basal segment, small submedian and narrowly triangular lateral spots, white. Ovipositor yellowish; venter suffused with whitish scales. Coxæ dark brown, femora suffused with whitish scales basally, yellowish brown apically; tibia dark brown with a narrow, white annulation basally, a broken, broad one just before the middle and a narrower one apically; tarsi a nearly uniform dark brown, the ventral surface suffused with white scales. Pulvilli as long as the unidentate claws. Ovipositor as long as the body, basally with submedian oval patches of broad scales, subapically with submedian groups of about eight moderately slender, chitinous hooks; terminal lobes narrowly oval, thickly setose. Type C. a2505.

The peculiar markings of the tibiæ in the female appear to be characteristic though somewhat variable.

Lobopteromyia venæ, new species.

Greenish, pouch-like vein galls are locally very abundant upon certain thorn bushes, *Cratægus* species at Nassau and have been recorded from

Massachusetts by Miss Stebbins.¹ The female provisionally referred to the above-named genus was reared May 31, 1907. A species of *Dicrodiplosis*, *D. venitalis*, has also been obtained from this gall and it is impossible, with the present data, to decide which species is the maker of the gall.

Egg: Length, 0.15 mm. Elongate, narrowly oval, pale reddish yellow.

Gall: Length, 1.5 cm. Greenish white, hollow, pouch-like vein swelling the size of a buckshot and on the underside of *Cratægus* leaves.

Larva: Length, 2.5 mm. Stout, yellowish orange. Head rather broad. Antennæ apparently uniarticulate, short, stout, tapering; breast-bone well developed, expanded anteriorly, bidentate, the shaft semitransparent. Skin under high power minutely and longitudinally striate. Terminal segment irregularly lobed and rounded. Possibly the larva of *Dicrodiplosis venitalis*.

Female: Length, 2 mm. Antennæ extending to the fifth abdominal segment, sparsely haired, fuscous yellowish; 14 segments, the fifth with the stem one-fifth the length of the subcylindric basal enlargement, which latter has a length about two and one-half times its diameter and sparse whorls of long, stout setæ basally and subapically; terminal segment somewhat produced, with a length two and one-half to three times its diameter. Palpi: First and second segments short, stout, the third nearly twice the length of the second, the fourth one-half longer than the third, dilated. Face fuscous yellowish. Mesonotum dark brown, the submedian lines and the posterior median area fuscous yellowish. Scutellum light fuscous yellowish, postscutellum dark brown. Abdomen light reddish brown. Genitalia yellowish. Wings hyaline. Halteres yellowish basally, slightly fuscous subapically. Legs a nearly uniform light fuscous yellowish; claws long, stout, strongly curved, simple, the pulvilli as long as the claws. Ovipositor short, stout, hardly one-fifth the length of the abdomen; terminal lobes short, stout, broadly rounded and sparsely setose. Type C. a 1128a.

***Dicrodiplosis venitalis*, new species.**

The female provisionally referred to the above-named genus was reared September 9, 1907, from a jar containing tumid vein galls on *Cratægus*. It is impossible to state, with the data at hand, whether this species or

¹ Stebbins, F. A. *Stringf. Mus. Nat. Hist.*, Bul. 1, p. 39, 1910.

Lobopteromyia venitalis is the true producer. The larva described as that of the last-named species may belong to this form. The gall is locally very abundant at Nassau.

Gall: Length, 1.5 cm. Greenish white, hollow, pouch-like vein swelling the size of a buckshot and on the underside of *Cratægus* leaves.

Female: Length, 2 mm. Antennæ nearly as long as the body, sparsely haired, probably light brown; 14 segments, the fifth with a stem three-fourths the length of the cylindric basal enlargement, which latter has a length thrice its diameter and sparse basal and subapical whorls of long, stout setæ; terminal segment slightly produced, the basal enlargement with a length over three times its diameter and apically a stout, setose, fingerlike process. Palpi: First segment short, irregular, the second with a length four times its diameter, the third a little longer than the second, the fourth one-half longer than the third. Mesonotum probably dark brown, the submedian lines yellowish. Scutellum and postscutellum probably yellowish, the abdomen presumably a light fuscous yellowish. Wings hyaline. Halteres, coxæ, and legs pale straw; claws slender, strongly curved, unidentate, the pulvilli rudimentary. Ovipositor nearly one-half the length of the abdomen, the terminal lobes narrowly fusiform, with a length over three times the diameter and sparsely setose. Type Cecid a 1128.

Diadiplosis buscki, new species.

The species described below was assembled under a lot labeled "*Diplosis coccidarum* Ckll., Porto Rico, August Busck, 339.⁰¹¹" and evidently had been reared from some scale insect. This species is quite different from *D. cocci* Felt.

Male: Length, 1.5 mm. Antennæ probably longer than the body, sparsely haired, light brown; 14 segments, the fifth having the stems with a length one-third and one-half their diameters, respectively, the distal enlargement one-fourth greater than its diameter, and a distinct constriction at the basal third; circumfili short, heavy, each filum having approximately 15 loops. Palpi: First segment short, irregular, the second with a length three times its diameter, the third a little longer, the second more slender. Mesonotum reddish brown. Scutellum a little lighter, postscutellum yellowish. Abdomen dark brown, a variable yellowish basally and apically. Halteres yellowish basally, fuscous apically. Wings hyaline. Legs a variable fuscous straw, the tarsi darker. Claws

strongly curved, slender, unidentate, the pulvilli rudimentary. Genitalia: Basal clasp segment moderately long, stout; terminal clasp segment short, stout, tapering; dorsal plate short, broad, deeply and roundly emarginate, the lobes narrowly rounded; ventral plate long, deeply and roundly emarginate, the divergent lobes narrowly rounded, setose. Harpes fused mesially, the ventral margin feebly and irregularly serrate.

Female: Length, 1.5 mm. Very nearly as in the male so far as may be determined by badly broken specimens. The second palpal segment has a length nearly three times its diameter and the third is a little longer and more slender than the second. Ovipositor short, the terminal lobes narrowly lanceolate and sparsely setose. Type Cecid 1529a.

NEW MUSCOID FLIES, MAINLY HYSTRICIIDÆ AND PYRRHOSIINÆ FROM THE ANDEAN MONTANYA

By CHARLES H. T. TOWNSEND

(Continued from page 96)

Eusignosoma, new genus.

Differs from *Signosomopsis* as follows: Description drawn from both sexes. Abdomen much rounded, still more narrowed apically, not at all emarginate in either sex. Length of anal segment on median line varies from conspicuously less than combined length of first to third segments on same line, the second and third segments being in such case much longer than in *Signosoma* and *Signosomopsis*, to about equal that of the first three segments. Pollinose marking of anal segment when present and its corresponding space when absent with from one to three or more pairs of macrochaetae, the pollen when present reaching sides of segment or not. Hind margin of first and second segments wavy in middle in both sexes, sometimes that of second segment in male not so, that of third segment in female at best faintly so. Second and third segments with single sparse marginal row of macrochaetae, that of second segment usually interrupted on each side of middle but sometimes entire, both usually with only one but sometimes two pairs of median discal macrochaetae, and with rather strong thickly placed lateral discal bristles or only short bristly hairs. Abdominal macrochaetae not so spinelike; no spines on venter but only bristles and bristly hairs on median line. Scutellum with weak but distinctly spinelike macrochaetae, discal and marginal; the erect posterior